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United States Patent [19]

[11] 4,414,413

[45] Nov. 8, 1983

[54] 1,2-DI[N,N-BIS(2-FLUORO-2,2-DINITROETHYL)CARBAMYL]HYDROZINE

[75] Inventors:

[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[21] Appl. No.: 332,797

[22] Filed: Dec. 21, 1981

Related U.S. Application Data

[62] Division of Ser. No. 228,032, Jan. 23, 1981.

[51] Int. Cl.³ C07C 133/02

[52] U.S. Cl. 564/35; 260/192; 564/59

[58] Field of Search 564/35, 59, 34; 260/192; 149/36

[56] References Cited

U.S. PATENT DOCUMENTS

3,017,406	1/1962	Mehr	564/35 X
3,227,753	1/1966	Mehr et al.	564/35 X
3,366,622	1/1968	Challior et al.	260/192
3,644,519	2/1972	Adolph et al.	564/59 X
3,850,978	11/1974	Gilligan et al.	260/482 C

FOREIGN PATENT DOCUMENTS

976552	11/1964	United Kingdom	564/35

OTHER PUBLICATIONS

Smith, Peter A., "Organic Reactions", vol. III, Chapter 9, The Curtius Reaction (see pp. 355 and 367), (1946).

Adolph et al., J. Org. Chem., vol. 37, pp. 747-751.

Adolph, "Chemical Abstracts", vol. 76, Abstract No. 112630f, (1972).

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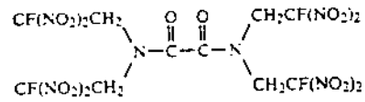
[57] ABSTRACT

N,N,N',N'-tetrakis(2-fluoro-2,2-dinitroethyl) oxamide,



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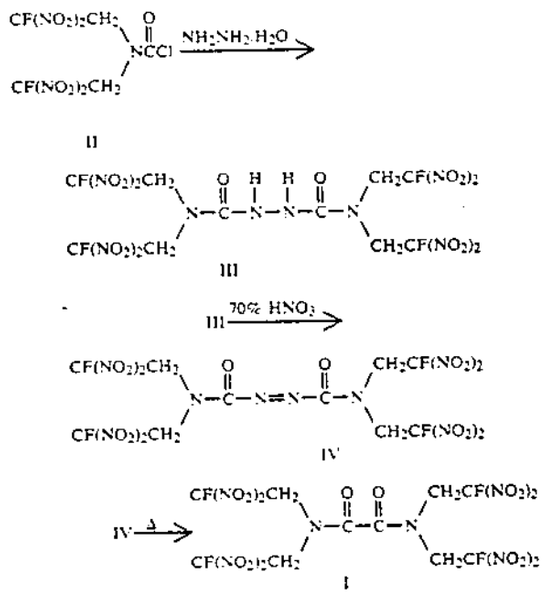
which is prepared by the following reaction sequence



N,N,N',N'-tetrakis(2-fluoro-2,2-dinitroethyl) oxamide is a high density, energetic explosive which is melt castable as well as thermally and hydrolytically stable.

1 Claim, No Drawings